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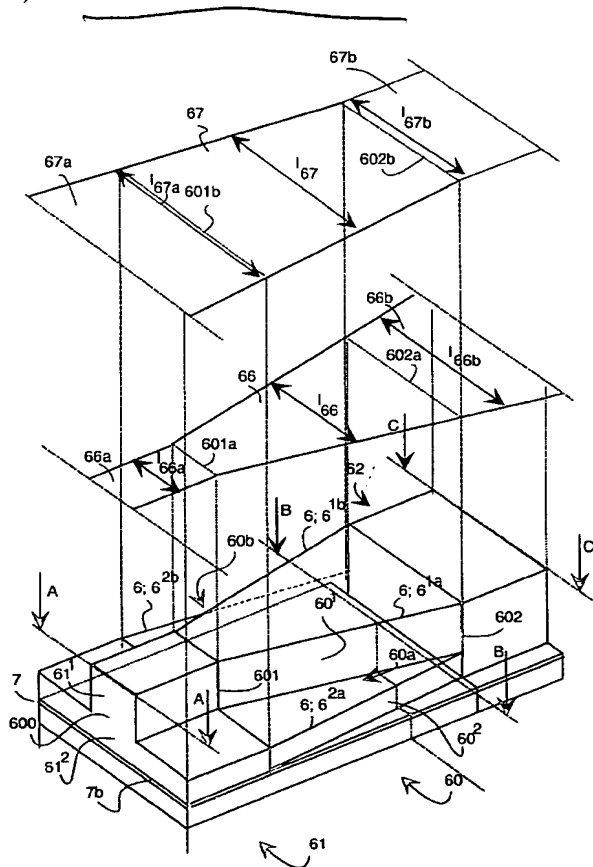
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20020698 11 April 2002 (11.04.2002) FI</p> <p>(71) Applicant (for all designated States except US): VALTION TEKNIILLINEN TUTKIMUSKESKUS [FI/FI];
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Ruusutarhantie 3 B 12, FIN-00300 Helsinki (FI).</p> <p>(74) Agent: BERGGREN OY AB; P.O. Box 16, FIN-00101 Helsinki (FI).</p> | <p>(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.</p> <p>(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).</p> <p>Published:
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(54) Title: OPTICAL WAVEGUIDE



(57) Abstract: The invention relates to an optical waveguide, which is part of an integrated optical circuit. The optical waveguide is arranged onto a planar support, and it has a core section conveying light to a certain direction, the direction of propagation. According to the invention, the optical waveguide is a modified optical waveguide (60) between a ridge-type optical waveguide (61) and a rectangular optical waveguide (62). In the modified optical waveguide, the core section is made of the one and same material so that the cross-section of the core section transverse to the direction of propagation of light is two-step (6^1a , 6^{2a} , 6^{1b} , 6^{2b}) from both edges (60a, 60b). The modified optical waveguide has two layers (60¹, 60²) of different widths (1_{60a} , 1_{60b}) so that the height (h_{60a}) of the first layer (60¹) is equal to the height of the ridge (61¹) of the ridge-type optical waveguide (61), and the height (h_{60b}) of the second layer (60²) is equal to the height of the base part (61²) of the ridge-type optical waveguide (61), and in which the sum of the heights (h_{60a} , h_{60b}) of the layers (60¹, 60²) is equal to the height of the rectangular optical waveguide (62), and the widths of the two layers (60¹, 60²) are arranged to change uniformly between the optical waveguides to be connected for fitting them together in the lateral direction. The invention also relates to a method for manufacturing an optical waveguide onto a support.

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